AMENDMENTS

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 – 20. (Canceled)

21. (currently amended) A method for obtaining a profile of protein binding to genomic DNA of a biological sample comprising:

obtaining a plurality of candidate fragments, wherein the candidate fragments are obtained by DNA foot printing, from the genomic DNA bound by a plurality of proteins, wherein the plurality of proteins comprise at least 50 proteins and wherein the candidate fragments are obtained by DNA foot printing;

eliminating unbound genomic DNA; and

detecting the candidate fragments, wherein the detecting further comprises hybridizing the candidate fragments with a collection of nucleic acid probes, wherein the nucleic acid probes are immobilized on a collection of bead or optical fibers.

23. (currently amended) A method for obtaining a profile of protein binding to genomic DNA of a biological sample comprising:

obtaining a plurality of candidate fragments, wherein the candidate fragments are obtained by DNA foot printing, from the genomic DNA bound by a plurality of proteins, wherein the plurality of proteins comprise at least 50 proteins and wherein the candidate fragments are obtained by DNA foot printing;

eliminating unbound genomic DNA; and

detecting the candidate fragments, wherein the detecting further comprises

hybridizing the candidate fragments with a collection of nucleic acid probes, wherein the nucleic acid probes are immobilized on a substrate, wherein the collection of nucleic acid probes contains at least 10,000 probes.

24. (Original): The method of Claim 23 wherein the collection of nucleic acid probes contains at least 50,000 probes.

25. (Original): The method of Claim 24 wherein the collection of nucleic acid probes contains at least 100,000 probes.

26. (Original): The method of Claim 25 wherein the collection of nucleic acid probes contains at least 1,000,000 probes.

27. (Original): The method of Claim 26 wherein the nucleic acid probes are oligonucleotide probes.

28. (Previously presented) The method of Claim 27 wherein the oligonucleotide probes are between 10-50 nucleotides in length.

29. (Original): The method of claim 28 wherein the oligonucleotide probes tile genomic sequences of interest.

30. (Original) The method of claim 29 wherein the genomic sequences of interest contain genic regions.

31. (Previously presented) The method of claim 29, where forward and lower strand sequences are tiled.

32 (Original): The method of claim 31 wherein at least one of the binding proteins is unknown.